

SEQUENCE LISTING

<110> Grainger, David J.
Tatalick, Lauen Marie

<120> Compounds and methods to inhibit or
augment an inflammatory response.

<130> 295.022US1

<140> US 08/927939

<141> 1997-09-11

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 Thr Cys Cys Tyr Asn Phe Thr Asn Arg Lys Ile Ser Val Gln Arg Leu
 35 40 45
 Ala Ser Tyr Arg Arg Ile Thr Ser Ser Lys Cys Pro Lys Glu Ala Val
 50 55 60
 Ile Phe Lys Thr Ile Val Ala Lys Glu Ile Cys Ala Asp Pro Lys Gln
 65 70 75 80
 Lys Trp Val Gln Asp Ser Met Asp His Leu Asp Lys Gln Thr Gln Thr
 85 90 95
 Pro Lys Thr

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<400> 17
 Ala Gln Pro Asp Ser Val Ser Ile Pro Ile Thr Cys Cys Phe Asn Val
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 Thr Asn Ile Gln Cys Pro Lys Glu Ala Val Ile Phe Lys Thr Lys Arg
 35 40 45
 Gly Lys Glu Val Cys Ala Asp Pro Lys Glu Arg Trp Val Arg Asp Ser
 50 55 60
 Met Lys His Leu Asp Gln Ile Phe Gln Asn Leu Lys Pro
 65 70 75

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 20 25 30
 Thr Cys Cys Tyr Arg Phe Ile Asn Lys Lys Ile Pro Lys Gln Arg Leu
 35 40 45
 Glu Ser Tyr Arg Arg Thr Thr Ser Ser His Cys Pro Arg Glu Ala Val
 50 55 60
 Ile Phe Lys Thr Lys Leu Asp Lys Glu Ile Cys Ala Asp Pro Thr Gln
 65 70 75 80
 Lys Trp Val Gln Asp Phe Met Lys His Leu Asp Lys Lys Thr Gln Thr
 85 90 95
 Pro Lys Leu

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<400> 19

Met	Gln	Val	Ser	Thr	Ala	Ala	Leu	Ala	Val	Leu	Leu	Cys	Thr	Met	Ala
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Leu	Cys	Asn	Gln	Phe	Ser	Ala	Ser	Leu	Ala	Ala	Asp	Thr	Pro	Thr	Ala
			20					25					30		
Cys	Cys	Phe	Ser	Tyr	Thr	Ser	Arg	Gln	Ile	Pro	Gln	Asn	Phe	Ile	Ala
		35					40					45			
Asp	Tyr	Phe	Glu	Thr	Ser	Ser	Gln	Cys	Ser	Lys	Pro	Gly	Val	Ile	Phe
	50					55					60				
Leu	Thr	Lys	Arg	Ser	Arg	Gln	Val	Cys	Ala	Asp	Pro	Ser	Glu	Glu	Trp
65					70					75					80
Val	Gln	Lys	Tyr	Val	Ser	Asp	Leu	Glu	Leu	Ser	Ala				
				85				90							

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<400> 20

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Phe	Cys	Ser	Pro	Ala	Leu	Ser	Ala	Pro	Met	Gly	Ser	Asp	Pro	Pro	Thr
			20					25					30		
Ala	Cys	Cys	Phe	Ser	Tyr	Thr	Ala	Arg	Lys	Leu	Pro	Arg	Asn	Phe	Val
		35					40					45			
Val	Asp	Tyr	Tyr	Glu	Thr	Ser	Ser	Leu	Cys	Ser	Gln	Pro	Ala	Val	Val
	50					55					60				
Phe	Gln	Thr	Lys	Arg	Ser	Lys	Gln	Val	Cys	Ala	Asp	Pro	Ser	Glu	Ser
65					70					75					80
Trp	Val	Gln	Glu	Tyr	Val	Tyr	Asp	Leu	Glu	Leu	Asn				
				85				90							

<210> 21
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 <212> PRT
 <213> Homo sapiens

<400> 21

Met	Lys	Val	Ser	Ala	Ala	Arg	Leu	Ala	Val	Ile	Leu	Ile	Ala	Thr	Ala
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Leu	Cys	Ala	Pro	Ala	Ser	Ala	Ser	Pro	Tyr	Ser	Ser	Asp	Thr	Thr	Pro
			20					25					30		
Cys	Cys	Phe	Ala	Tyr	Ile	Ala	Arg	Pro	Leu	Pro	Arg	Ala	His	Ile	Lys
		35					40					45			
Glu	Tyr	Phe	Tyr	Thr	Ser	Gly	Lys	Cys	Ser	Asn	Pro	Ala	Val	Val	Phe

50						55					60					
Val	Thr	Arg	Lys	Asn	Arg	Gln	Val	Cys	Ala	Asn	Pro	Glu	Lys	Lys	Trp	
65					70					75					80	
Val	Arg	Glu	Tyr	Ile	Asn	Ser	Leu	Glu	Met	Ser						
				85					90							

<210> 22
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 <213> Homo sapiens

Met	Asn	Ala	Lys	Val	Val	Val	Val	Leu	Val	Leu	Val	Leu	Thr	Ala	Leu	
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Cys	Leu	Ser	Asp	Gly	Lys	Pro	Val	Ser	Leu	Ser	Tyr	Arg	Cys	Pro	Cys	
			20					25					30			
Arg	Phe	Phe	Glu	Ser	His	Val	Ala	Arg	Ala	Asn	Val	Lys	His	Leu	Lys	
		35					40					45				
Ile	Leu	Asn	Thr	Pro	Asn	Cys	Ala	Leu	Gln	Ile	Val	Ala	Arg	Leu	Lys	
50						55				60						
Asn	Asn	Asn	Arg	Gln	Val	Cys	Ile	Asp	Pro	Lys	Leu	Lys	Trp	Ile	Gln	
65				70					75					80		
Glu	Tyr	Leu	Glu	Lys	Ala	Leu	Asn	Lys								
				85												

<210> 23
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 <213> Homo sapiens

Met	Thr	Ser	Lys	Leu	Ala	Val	Ala	Leu	Leu	Ala	Ala	Phe	Leu	Ile	Ser	
1				5				10						15		
Ala	Ala	Leu	Cys	Glu	Gly	Ala	Val	Leu	Pro	Arg	Ser	Ala	Lys	Glu	Leu	
			20					25					30			
Arg	Cys	Gln	Cys	Ile	Lys	Thr	Tyr	Ser	Lys	Pro	Phe	His	Pro	Lys	Phe	
		35					40					45				
Ile	Lys	Glu	Leu	Arg	Val	Ile	Glu	Ser	Gly	Pro	His	Cys	Ala	Asn	Thr	
50						55				60						
Glu	Ile	Ile	Val	Lys	Leu	Ser	Asp	Gly	Arg	Glu	Leu	Cys	Leu	Asp	Pro	
65				70					75					80		
Lys	Glu	Asn	Trp	Val	Gln	Arg	Val	Val	Glu	Lys	Phe	Leu	Lys	Arg	Ala	
				85					90					95		
Glu	Asn	Ser														

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Met	Ala	Arg	Ala	Ala	Leu	Ser	Ala	Ala	Pro	Ser	Asn	Pro	Arg	Leu	Leu	

Ser Glu Pro Thr Thr Leu Phe Lys Thr Ala Ser Ala Leu Arg Ser Ser
100 105 110
Ala Pro Leu Asn Val Lys Leu Thr Arg Lys Ser Glu Ala Asn Ala Ser
115 120 125
Thr Thr Phe Ser Thr Thr Thr Ser Ser Thr Ser Val Gly Val Thr Ser
130 135 140
Val Thr Val Asn
145

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Cys Leu Asp Pro Lys Lys Glu Trp Ile Gln
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<222> (34)...(327)

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Met Lys Val Ser Ala Val Leu
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ctg tgc ctg ctg ctc atg aca gca gct ttc aac ccc cag gga ctt gct 102
Leu Cys Leu Leu Leu Met Thr Ala Ala Phe Asn Pro Gln Gly Leu Ala
10 15 20

cag cca gat gca ctc aac gtc cca tct act tgc tgc ttc aca ttt agc 150
Gln Pro Asp Ala Leu Asn Val Pro Ser Thr Cys Cys Phe Thr Phe Ser
25 30 35

agt aag aag atc tcc ttg cag agg ctg aag agc tat gtg atc acc acc 198
Ser Lys Lys Ile Ser Leu Gln Arg Leu Lys Ser Tyr Val Ile Thr Thr
40 45 50 55

agc agg tgt ccc cag aag gct gtc atc ttc aga acc aaa ctg ggc aag 246
Ser Arg Cys Pro Gln Lys Ala Val Ile Phe Arg Thr Lys Leu Gly Lys
60 65 70

gag atc tgt gct gac cca aag gag aag tgg gtc cag aat tat atg aaa 294
Glu Ile Cys Ala Asp Pro Lys Glu Lys Trp Val Gln Asn Tyr Met Lys
75 80 85

cac ctg ggc cgg aaa gct cac acc ctg aag act tgaactctgc taccctact 347

His Leu Gly Arg Lys Ala His Thr Leu Lys Thr
 90 95

gaaatcaagc	tggagtacgt	gaaatgactt	ttccattctc	ctctggcctc	ctcttctatg	407
ctttggaata	cttctaccat	aattttcaaa	taggatgcat	tcggttttgt	gattcaaaaat	467
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<220>
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		Met Asn Ala	Lys Val Val	Val Val Val	Leu Val Leu	
		1	5		10	

gtg ctg acc	gcg ctc tgc	ctc agc gac	ggg aag ccc	gtc agc ctg	agc	160
Val Leu Thr	Ala Leu Cys	Leu Ser Asp	Gly Lys Pro	Val Ser Leu	Ser	
	15	20		25		

tac aga tgc	cca tgc cga	ttc ttc gaa	agc cat gtt	gcc aga gcc	aac	208
Tyr Arg Cys	Pro Cys Arg	Phe Phe Glu	Ser His Val	Ala Arg Ala	Asn	
	30	35		40		

gtc aag cat	ctc aaa att	ctc aac act	cca aac tgt	gcc ctt cag	att	256
Val Lys His	Leu Lys Ile	Leu Asn Thr	Pro Asn Cys	Ala Leu Gln	Ile	
	45	50		55		

gta gcc cgg	ctg aag aac	aac aac aga	caa gtg tgc	att gac ccg	aag	304
Val Ala Arg	Leu Lys Asn	Asn Asn Arg	Gln Val Cys	Ile Asp Pro	Lys	
	60	65	70		75	

cta aag tgg	att cag gag	tac ctg gag	aaa gct tta	aac aag agg	ttc	352
Leu Lys Trp	Ile Gln Glu	Tyr Leu Glu	Lys Ala Leu	Asn Lys Arg	Phe	
	80	85		90		

aag atg tgagaggggc	agacgcctga	ggaaccctta	cagtaggagc	ccagctctga	408
Lys Met					

aaccagtgtt	agggaagggc	ctgccacagc	ctcccctgcc	agggcagggc	cccaggcatt	468
gccaagggct	ttgttttgca	cacttttgcca	tatttttcacc	atttgattat	gtagcaaaaat	528

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aaccttccgg	aagcctcccc	atcagcacc	atg aac cca	agt gct gcc gtc att		2093
			Met Asn Pro	Ser Ala Ala Val Ile		

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Phe Cys Leu Ile Leu Leu Gly Leu Ser Gly Thr Gln	
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Gly Ile Pro	
ctc gca agg acg gtc cgc tgc aac tgc atc cat atc gat gac ggg cca	2724
Leu Ala Arg Thr Val Arg Cys Asn Cys Ile His Ile Asp Asp Gly Pro	
25 30 35	
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Val Arg Met Arg Ala Ile Gly Lys Leu Glu Ile Ile Pro Ala Ser Leu	
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Ser Cys Pro Arg Val Glu Ile Ile	
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Ala Thr Met	
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Lys Lys Asn Asp Glu Gln Arg Cys Leu Asn Pro Glu Ser Lys Thr Ile	
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Lys Asn Leu Met Lys Ala Phe Ser Gln Lys Arg	
85 90	
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Ser Lys Arg Ala Pro	
95	

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 <213> Homo sapiens

<220>
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<400> 31

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acg	ctc	tcc	gcc	gcc	ccc	agc	aat	ccc	cgg	ctc	ctg	cgg	gtg	gcg	ctg	102
Thr	Leu	Ser	Ala	Ala	Pro	Ser	Asn	Pro	Arg	Leu	Leu	Arg	Val	Ala	Leu	
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ctg	ctc	ctg	ctc	ctg	gtg	gcc	gcc	agc	cgg	cgc	gca	gca	gga	gcg	ccc	150
Leu	Leu	Leu	Leu	Leu	Val	Ala	Ala	Ser	Arg	Arg	Ala	Ala	Gly	Ala	Pro	
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ctg	gcc	act	gaa	ctg	cgc	tgc	cag	tgc	ttg	cag	acc	ctg	cag	gga	att	198
Leu	Ala	Thr	Glu	Leu	Arg	Cys	Gln	Cys	Leu	Gln	Thr	Leu	Gln	Gly	Ile	
			40					45					50			
cac	ctc	aag	aac	atc	caa	agt	gtg	aag	gtg	aag	tcc	ccc	gga	ccc	cac	246
His	Leu	Lys	Asn	Ile	Gln	Ser	Val	Lys	Val	Lys	Ser	Pro	Gly	Pro	His	
		55					60					65				
tgc	gcc	caa	acc	gaa	gtc	ata	gcc	aca	ctc	aag	aat	ggg	cag	aaa	gct	294
Cys	Ala	Gln	Thr	Glu	Val	Ile	Ala	Thr	Leu	Lys	Asn	Gly	Gln	Lys	Ala	
	70					75					80					
tgt	ctc	aac	ccc	gca	tgc	ccc	atg	gtt	aag	aaa	atc	atc	gaa	aag	atg	342
Cys	Leu	Asn	Pro	Ala	Ser	Pro	Met	Val	Lys	Lys	Ile	Ile	Glu	Lys	Met	
85					90					95					100	

ctg aaa aat ggc aaa tcc aac tgaccagaag gaaggaggaa gcttattggt 393
Leu Lys Asn Gly Lys Ser Asn
105

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<212> DNA
<213> Homo sapiens

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<222> (107)...(448)

<400> 32

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Met Ser Leu
1

ctg tcc agc cgc gcg gcc cgt gtc ccc ggt cct tcg agc tcc ttg tgc 163
Leu Ser Ser Arg Ala Ala Arg Val Pro Gly Pro Ser Ser Ser Leu Cys
5 10 15

gcg ctg ttg gtg ctg ctg ctg ctg ctg acg cag cca ggg ccc atc gcc 211
Ala Leu Leu Val Leu Leu Leu Leu Leu Thr Gln Pro Gly Pro Ile Ala
20 25 30 35

agc gct ggt cct gcc gct gct gtg ttg aga gag ctg cgt tgc gtt tgt 259
Ser Ala Gly Pro Ala Ala Ala Val Leu Arg Glu Leu Arg Cys Val Cys
40 45 50

tta cag acc acg cag gga gtt cat ccc aaa atg atc agt aat ctg caa 307
Leu Gln Thr Thr Gln Gly Val His Pro Lys Met Ile Ser Asn Leu Gln
55 60 65

gtg ttc gcc ata ggc cca cag tgc tcc aag gtg gaa gtg gta gcc tcc 355
Val Phe Ala Ile Gly Pro Gln Cys Ser Lys Val Glu Val Val Ala Ser
70 75 80

ctg aag aac ggg aag gaa att tgt ctt gat cca gaa gcc cct ttt cta 403

Leu	Lys	Asn	Gly	Lys	Glu	Ile	Cys	Leu	Asp	Pro	Glu	Ala	Pro	Phe	Leu	
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aag	aaa	gtc	atc	cag	aaa	att	ttg	gac	ggt	gga	aac	aag	gaa	aac		448
Lys	Lys	Val	Ile	Gln	Lys	Ile	Leu	Asp	Gly	Gly	Asn	Lys	Glu	Asn		
100					105					110						

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gtttccccag	tagttagctt	tcttccttgg	attcctcact	tttgaagagt	gtgaggaaaa		628
cctatgtttg	gcgcttaagc	tttcagctca	gcttaatgaa	gtgttttagca	tagtacctct		688
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aatatatttc	cttatttcaga	atttctaaaa	gtttaagttc	tatgagggtc	aatatcttat		1108
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aaaaa							1173

<210> 33
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 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (34)...(327)

<400> 33

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ctg	tgc	ctg	ctg	ctc	atg	aca	gca	gct	ttc	aac	ccc	cag	gga	ctt	gct	102
Leu	Cys	Leu	Leu	Leu	Met	Thr	Ala	Ala	Phe	Asn	Pro	Gln	Gly	Leu	Ala	
		10					15					20				

cag	cca	gat	gca	ctc	aac	gtc	cca	tct	act	tgc	tgc	ttc	aca	ttt	agc	150
Gln	Pro	Asp	Ala	Leu	Asn	Val	Pro	Ser	Thr	Cys	Cys	Phe	Thr	Phe	Ser	
	25				30					35						

agt	aag	aag	atc	tcc	ttg	cag	agg	ctg	aag	agc	tat	gtg	atc	acc	acc	198
Ser	Lys	Lys	Ile	Ser	Leu	Gln	Arg	Leu	Lys	Ser	Tyr	Val	Ile	Thr	Thr	
	40				45				50						55	

agc	agg	tgt	ccc	cag	aag	gct	gtc	atc	ttc	aga	acc	aaa	ctg	ggc	aag	246
Ser	Arg	Cys	Pro	Gln	Lys	Ala	Val	Ile	Phe	Arg	Thr	Lys	Leu	Gly	Lys	
				60				65					70			

gag	atc	tgt	gct	gac	cca	aag	gag	aag	tgg	gtc	cag	aat	tat	atg	aaa	294
Glu	Ile	Cys	Ala	Asp	Pro	Lys	Glu	Lys	Trp	Val	Gln	Asn	Tyr	Met	Lys	

75

80

85

cac ctg ggc cgg aaa gct cac acc ctg aag act tgaactctgc taccctact 347
 His Leu Gly Arg Lys Ala His Thr Leu Lys Thr

90

95

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 ctttgaata cttctaccat aattttcaaa taggatgcac tcggttttgt gattcaaaat 467
 gtactatgtg ttaagtaata ttggctatta ttgacttgt tgctggtttg gagtttattt 527
 gagtattgct gatcttttct aaagcaaggc cttgagcaag taggttgctg tctctaagcc 587
 cccttccctt ccactatgag ctgctggcag tgggttgat tcggttccca ggggttgaga 647
 gcatgcctgt gggagtcacg gacatgaagg gatgctgcaa tgtaggaagg agagctcttt 707
 gtgaatgtga ggttggtgct aaattattgt ttattgtgga aagatgaatg caatagtagg 767
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<210> 34

<211> 3112

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1192)...(1267)

<221> CDS

<222> (1953)...(2067)

<221> CDS

<222> (2488)...(2575)

<400> 34

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 Met Gln

1

gtc tcc act gct gcc ctt gcc gtc ctc ctc tgc acc atg gct ctc tgc 1245
Val Ser Thr Ala Ala Leu Ala Val Leu Leu Cys Thr Met Ala Leu Cys
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Asn Gln Val Leu Ser Ala Pro
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Leu

gct gct gac acg ccg acc gcc tgc tgc ttc agc tac acc tcc cga cag 2002
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30 35 40

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Ile Pro Gln Asn Phe Ile Ala Asp Tyr Phe Glu Thr Ser Ser Gln Cys
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Ser Lys Pro Ser Val Ile
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Phe Leu Thr Lys Arg Gly Arg
65 70

cag gtc tgt gct gac ccc agt gag gag tgg gtc cag aaa tac gtc agt 2557
Gln Val Cys Ala Asp Pro Ser Glu Glu Trp Val Gln Lys Tyr Val Ser
75 80 85

gac ctg gag ctg agt gcc tgaggggtcc agaagcttcg aggcccagcg 2605
Asp Leu Glu Leu Ser Ala
90

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 <211> 481
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (55) ... (333)

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Lys Ile Ser Val Ala Ala Ile Pro Phe Phe Leu Leu Ile Thr Ile Ala	
5 10 15	

cta ggg acc aag act gaa tcc tcc tca cgg gga cct tac cac ccc tca	153
Leu Gly Thr Lys Thr Glu Ser Ser Ser Arg Gly Pro Tyr His Pro Ser	
20 25 30	

gag tgc tgc ttc acc tac act acc tac aag atc ccg cgt cag cgg att	201
Glu Cys Cys Phe Thr Tyr Thr Thr Tyr Lys Ile Pro Arg Gln Arg Ile	
35 40 45	

atg gat tac tat gag acc aac agc cag tgc tcc aag ccc gga att gtc	249
Met Asp Tyr Tyr Glu Thr Asn Ser Gln Cys Ser Lys Pro Gly Ile Val	
50 55 60 65	

ttc atc acc aaa agg ggc cat tcc gtc tgt acc aac ccc agt gac aag	297
Phe Ile Thr Lys Arg Gly His Ser Val Cys Thr Asn Pro Ser Asp Lys	
70 75 80	

tgg gtc cag gac tat atc aag gac atg aag gag aac tgagtgaccc	343
Trp Val Gln Asp Tyr Ile Lys Asp Met Lys Glu Asn	
85 90	

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<210> 36

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Gln	Glu	Ile	Pro	Leu	Arg	Ala	Ile	Leu	Cys	Tyr	Arg	Asn	Thr	Ser	Ser	
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Ile	Cys	Ser	Asn	Glu	Gly	Leu	Ile							
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Asp	Thr	Val	Gly	Trp	Val	Gln	Arg	His	Arg	Lys	Met	Leu	Arg	His	Cys	
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Pro	Ser	Lys	Arg	Lys					
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Arg Pro Leu His Ala Leu Gln Val Leu Leu Leu Leu Ser Leu Leu Leu
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Lys Gly Lys Glu Glu Ser Leu Asp Ser Asp Leu Tyr Ala Glu Leu Arg
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tgc atg tgt ata aag aca acc tct gga att cat ccc aaa aac atc caa      300
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Ser Leu Glu Val Ile Gly Lys Gly Thr His Cys Asn Gln Val Glu Val
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ata gcc aca ctg aag gat ggg agg aaa atc tgc ctg gac cca gat gct      396
Ile Ala Thr Leu Lys Asp Gly Arg Lys Ile Cys Leu Asp Pro Asp Ala
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ccc aga atc aag aaa att gta cag aaa aaa ttg gca ggt gat gaa tct      444
Pro Arg Ile Lys Lys Ile Val Gln Lys Lys Leu Ala Gly Asp Glu Ser
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Ala Asp

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 Val Leu Phe Leu Leu Gly Ile Ile Leu Leu Val Leu Ile Gly Val Gln
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 Gly Thr Pro Val Val Arg Lys Gly Arg Cys Ser Cys Ile Ser Thr Asn
 25 30 35

caa ggg act atc cac cta caa tcc ttg aaa gac ctt aaa caa ttt gcc 198
 Gln Gly Thr Ile His Leu Gln Ser Leu Lys Asp Leu Lys Gln Phe Ala
 40 45 50

cca agc cct tcc tgc gag aaa att gaa atc att gct aca ctg aag aat 246
 Pro Ser Pro Ser Cys Glu Lys Ile Glu Ile Ile Ala Thr Leu Lys Asn
 55 60 65

gga gtt caa aca tgt cta aac cca gat tca gca gat gtg aag gaa ctg 294
 Gly Val Gln Thr Cys Leu Asn Pro Asp Ser Ala Asp Val Lys Glu Leu
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 Gly Lys Lys His Gln Lys Lys Lys Val Leu Lys Val Arg Lys Ser Gln
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 Arg Ser Arg Gln Lys Lys Thr Thr
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 1 5 10

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<400> 45

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			20					25					30		
Cys	Ile	Ser	Thr	Asn	Gln	Gly	Thr	Ile	His	Leu	Gln	Ser	Leu	Lys	Asp
		35					40					45			
Leu	Lys	Gln	Phe	Ala	Pro	Ser	Pro	Ser	Cys	Glu	Lys	Ile	Glu	Ile	Ile
	50					55				60					
Ala	Thr	Leu	Lys	Asn	Gly	Val	Gln	Thr	Cys	Leu	Asn	Pro	Asp	Ser	Ala
65				70					75					80	
Asp	Val	Lys	Glu	Leu	Ile	Lys	Lys	Trp	Glu	Lys	Gln	Val	Ser	Gln	Lys
			85					90					95		
Lys	Lys	Gln	Lys	Asn	Gly	Lys	Lys	His	Gln	Lys	Lys	Lys	Val	Leu	Lys
			100				105						110		
Val	Arg	Lys	Ser	Gln	Arg	Ser	Arg	Gln	Lys	Lys	Thr	Thr			
		115					120					125			

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 <212> PRT
 <213> Homo sapiens

<400> 46

Met	Ser	Leu	Arg	Leu	Asp	Thr	Thr	Pro	Ser	Cys	Asn	Ser	Ala	Arg	Pro
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Leu	His	Ala	Leu	Gln	Val	Leu	Leu	Leu	Leu	Ser	Leu	Leu	Leu	Thr	Ala
			20					25					30		
Leu	Ala	Ser	Ser	Thr	Lys	Gly	Gln	Thr	Lys	Arg	Asn	Leu	Ala	Lys	Gly
		35				40					45				
Lys	Glu	Glu	Ser	Leu	Asp	Ser	Asp	Leu	Tyr	Ala	Glu	Leu	Arg	Cys	Met
	50				55						60				
Cys	Ile	Lys	Thr	Thr	Ser	Gly	Ile	His	Pro	Lys	Asn	Ile	Gln	Ser	Leu
65					70				75					80	
Glu	Val	Ile	Gly	Lys	Gly	Thr	His	Cys	Asn	Gln	Val	Glu	Val	Ile	Ala
			85					90						95	
Thr	Leu	Lys	Asp	Gly	Arg	Lys	Ile	Cys	Leu	Asp	Pro	Asp	Ala	Pro	Arg
			100					105					110		
Ile	Lys	Lys	Ile	Val	Gln	Lys	Lys	Leu	Ala	Gly	Asp	Glu	Ser	Ala	Asp
		115					120					125			

<210> 47
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 <212> PRT
 <213> Homo sapiens

<400> 47

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Trp	Pro	Glu	Asp	Val	Asp	Ser	Lys	Ser	Met	Gln	Val	Pro	Phe	Ser	Arg
			20					25					30		
Cys	Cys	Phe	Ser	Phe	Ala	Glu	Gln	Glu	Ile	Pro	Leu	Arg	Ala	Ile	Leu
		35				40					45				
Cys	Tyr	Arg	Asn	Thr	Ser	Ser	Ile	Cys	Ser	Asn	Glu	Gly	Leu	Ile	Phe
	50				55					60					
Lys	Leu	Lys	Arg	Gly	Lys	Glu	Ala	Cys	Ala	Leu	Asp	Thr	Val	Gly	Trp
65				70					75					80	
Val	Gln	Arg	His	Arg	Lys	Met	Leu	Arg	His	Cys	Pro	Ser	Lys	Arg	Lys
			85					90						95	

<210> 48
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 <212> PRT
 <213> Homo sapiens

<400> 48

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Ala	Leu	Gly	Thr	Lys	Thr	Glu	Ser	Ser	Ser	Arg	Gly	Pro	Tyr	His	Pro
			20				25					30			
Ser	Glu	Cys	Cys	Phe	Thr	Tyr	Thr	Thr	Tyr	Lys	Ile	Pro	Arg	Gln	Arg

	35					40				45									
Ile	Met	Asp	Tyr	Tyr	Glu	Thr	Asn	Ser	Gln	Cys	Ser	Lys	Pro	Gly	Ile				
	50					55					60								
Val	Phe	Ile	Thr	Lys	Arg	Gly	His	Ser	Val	Cys	Thr	Asn	Pro	Ser	Asp				
65					70					75					80				
Lys	Trp	Val	Gln	Asp	Tyr	Ile	Lys	Asp	Met	Lys	Glu	Asn							
			85						90										

<210> 49
 <211> 93
 <212> PRT
 <213> Homo sapiens

Met	Gln	Val	Ser	Thr	Ala	Ala	Leu	Ala	Val	Leu	Leu	Cys	Thr	Met	Ala				
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Leu	Cys	Asn	Gln	Val	Leu	Ser	Ala	Pro	Leu	Ala	Ala	Asp	Thr	Pro	Thr				
			20					25					30						
Ala	Cys	Cys	Phe	Ser	Tyr	Thr	Ser	Arg	Gln	Ile	Pro	Gln	Asn	Phe	Ile				
		35					40					45							
Ala	Asp	Tyr	Phe	Glu	Thr	Ser	Ser	Gln	Cys	Ser	Lys	Pro	Ser	Val	Ile				
	50					55					60								
Phe	Leu	Thr	Lys	Arg	Gly	Arg	Gln	Val	Cys	Ala	Asp	Pro	Ser	Glu	Glu				
65					70				75					80					
Trp	Val	Gln	Lys	Tyr	Val	Ser	Asp	Leu	Glu	Leu	Ser	Ala							
				85					90										

<210> 50
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 <212> PRT
 <213> Homo sapiens

Met	Lys	Val	Ser	Ala	Val	Leu	Leu	Cys	Leu	Leu	Leu	Met	Thr	Ala	Ala				
1				5					10					15					
Phe	Asn	Pro	Gln	Gly	Leu	Ala	Gln	Pro	Asp	Ala	Leu	Asn	Val	Pro	Ser				
			20					25					30						
Thr	Cys	Cys	Phe	Thr	Phe	Ser	Ser	Lys	Lys	Ile	Ser	Leu	Gln	Arg	Leu				
		35					40					45							
Lys	Ser	Tyr	Val	Ile	Thr	Thr	Ser	Arg	Cys	Pro	Gln	Lys	Ala	Val	Ile				
	50					55					60								
Phe	Arg	Thr	Lys	Leu	Gly	Lys	Glu	Ile	Cys	Ala	Asp	Pro	Lys	Glu	Lys				
65					70				75					80					
Trp	Val	Gln	Asn	Tyr	Met	Lys	His	Leu	Gly	Arg	Lys	Ala	His	Thr	Leu				
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Lys Thr

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 Lys Val Ser Ala Ala Leu Leu Trp Leu Leu Leu Ile Ala Ala Ala Phe
 5 10 15

agc ccc cag ggg ctc gct ggg cca gct tct gtc cca acc acc tgc tgc 152
 Ser Pro Gln Gly Leu Ala Gly Pro Ala Ser Val Pro Thr Thr Cys Cys
 20 25 30

ttt aac ctg gcc aat agg aag ata ccc ctt cag cga cta gag agc tac 200
 Phe Asn Leu Ala Asn Arg Lys Ile Pro Leu Gln Arg Leu Glu Ser Tyr
 35 40 45

agg aga atc acc agt ggc aaa tgt ccc cag aaa gct gtg atc ttc aag 248
 Arg Arg Ile Thr Ser Gly Lys Cys Pro Gln Lys Ala Val Ile Phe Lys
 50 55 60 65

acc aaa ctg gcc aag gat atc tgt gcc gac ccc aag aag aag tgg gtg 296
 Thr Lys Leu Ala Lys Asp Ile Cys Ala Asp Pro Lys Lys Lys Trp Val
 70 75 80

cag gat tcc atg aag tat ctg gac caa aaa tct cca act cca aag cca 344
 Gln Asp Ser Met Lys Tyr Leu Asp Gln Lys Ser Pro Thr Pro Lys Pro
 85 90 95

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<210> 52
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<400> 52

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Pro Ile Ala Ser Ala Gly Pro Ala Ala Ala Val Leu Arg Glu Leu Arg
 35 40 45
 Cys Val Cys Leu Gln Thr Thr Gln Gly Val His Pro Lys Met Ile Ser
 50 55 60
 Asn Leu Gln Val Phe Ala Ile Gly Pro Gln Cys Ser Lys Val Glu Val
 65 70 75 80
 Val Ala Ser Leu Lys Asn Gly Lys Glu Ile Cys Leu Asp Pro Glu Ala
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 Glu Asn

<210> 53
 <211> 107
 <212> PRT
 <213> Homo sapiens

<400> 53
 Met Ala Arg Ala Thr Leu Ser Ala Ala Pro Ser Asn Pro Arg Leu Leu
 1 5 10 15
 Arg Val Ala Leu Leu Leu Leu Leu Val Ala Ala Ser Arg Arg Ala
 20 25 30
 Ala Gly Ala Pro Leu Ala Thr Glu Leu Arg Cys Gln Cys Leu Gln Thr
 35 40 45
 Leu Gln Gly Ile His Leu Lys Asn Ile Gln Ser Val Lys Val Lys Ser
 50 55 60
 Pro Gly Pro His Cys Ala Gln Thr Glu Val Ile Ala Thr Leu Lys Asn
 65 70 75 80
 Gly Gln Lys Ala Cys Leu Asn Pro Ala Ser Pro Met Val Lys Lys Ile
 85 90 95
 Ile Glu Lys Met Leu Lys Asn Gly Lys Ser Asn
 100 105

<210> 54
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 54
 Met Asn Pro Ser Ala Ala Val Ile Phe Cys Leu Ile Leu Leu Gly Leu
 1 5 10 15
 Ser Gly Thr Gln Gly Ile Pro Leu Ala Arg Thr Val Arg Cys Asn Cys
 20 25 30
 Ile His Ile Asp Asp Gly Pro Val Arg Met Arg Ala Ile Gly Lys Leu
 35 40 45
 Glu Ile Ile Pro Ala Ser Leu Ser Cys Pro Arg Val Glu Ile Ile Ala
 50 55 60
 Thr Met Lys Lys Asn Asp Glu Gln Arg Cys Leu Asn Pro Glu Ser Lys
 65 70 75 80
 Thr Ile Lys Asn Leu Met Lys Ala Phe Ser Gln Lys Arg Ser Lys Arg
 85 90 95
 Ala Pro

<210> 55
 <211> 1041
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (18)...(338)

<400> 55

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Met Ala Arg Ala Ala Leu Ser Ala Ala Pro Ser	
1 5 10	
aat ccc cgg ctc ctg cga gtg gca ctg ctg ctc ctg ctc ctg gta gcc	98
Asn Pro Arg Leu Leu Arg Val Ala Leu Leu Leu Leu Leu Val Ala	
15 20 25	
gct ggc cgg cgc gca gca gga gcg tcc gtg gcc act gaa ctg cgc tgc	146
Ala Gly Arg Arg Ala Ala Gly Ala Ser Val Ala Thr Glu Leu Arg Cys	
30 35 40	
cag tgc ttg cag acc ctg cag gga att cac ccc aag aac atc caa agt	194
Gln Cys Leu Gln Thr Leu Gln Gly Ile His Pro Lys Asn Ile Gln Ser	
45 50 55	
gtg aac gtg aag tcc ccc gga ccc cac tgc gcc caa acc gaa gtc ata	242
Val Asn Val Lys Ser Pro Gly Pro His Cys Ala Gln Thr Glu Val Ile	
60 65 70 75	
gcc aca ctc aag aat ggg cgg aaa gct tgc ctc aat cct gca tcc ccc	290
Ala Thr Leu Lys Asn Gly Arg Lys Ala Cys Leu Asn Pro Ala Ser Pro	
80 85 90	
ata gtt aag aaa atc atc gaa aag atg ctg aac agt gac aaa tcc aac	338
Ile Val Lys Lys Ile Ile Glu Lys Met Leu Asn Ser Asp Lys Ser Asn	
95 100 105	
tgaccagaag ggaggaggaa gctcactggt ggctgttccct gaaggaggcc ctgcccttat	398
aggaacagaa gaggaaagag agacacagct gcagaggcca cctggattgt gcctaattgt	458
tttgagcatc gcttaggaga agtcttctat ttattttattt attcattagt tttgaagatt	518
ctatgttaat attttaggtg taaaataatt aagggtatga ttaactctac ctgcacactg	578
tcctattata ttcattcttt ttgaaatgtc aaccccaagt tagttcaatc tggattcata	638
tttaatttga aggtagaatg ttttcaaattg ttctccagtc attatgttaa tatttctgag	698
gagcctgcaa catgccagcc actgtgatag aggctggcgg atccaagcaa atggccaatg	758
agatcattgt gaaggcaggg gaatgtatgt gcacatctgt tttgtaactg tttagatgaa	818
tgtcagttgt tattttattga aatgatttca cagtgtgttg tcaacatttc tcatgttgaa	878
actttaagaa ctaaaatgtt ctaaatatcc cttggacatt ttatgtcttt cttgtaaggc	938
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tattgatggt ttcatagaga atataaaaat aaagcactta tag	1041

<210> 56
 <211> 93
 <212> PRT
 <213> Homo sapiens

<400> 56
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 Cys Leu Ser Asp Gly Lys Pro Val Ser Leu Ser Tyr Arg Cys Pro Cys
 20 25 30
 Arg Phe Phe Glu Ser His Val Ala Arg Ala Asn Val Lys His Leu Lys
 35 40 45
 Ile Leu Asn Thr Pro Asn Cys Ala Leu Gln Ile Val Ala Arg Leu Lys
 50 55 60
 Asn Asn Asn Arg Gln Val Cys Ile Asp Pro Lys Leu Lys Trp Ile Gln
 65 70 75 80
 Glu Tyr Leu Glu Lys Ala Leu Asn Lys Arg Phe Lys Met
 85 90

<210> 57
 <211> 107
 <212> PRT
 <213> Homo sapiens

<400> 57
 Met Ala Arg Ala Ala Leu Ser Ala Ala Pro Ser Asn Pro Arg Leu Leu
 1 5 10 15
 Arg Val Ala Leu Leu Leu Leu Leu Val Ala Ala Gly Arg Arg Ala
 20 25 30
 Ala Gly Ala Ser Val Ala Thr Glu Leu Arg Cys Gln Cys Leu Gln Thr
 35 40 45
 Leu Gln Gly Ile His Pro Lys Asn Ile Gln Ser Val Asn Val Lys Ser
 50 55 60
 Pro Gly Pro His Cys Ala Gln Thr Glu Val Ile Ala Thr Leu Lys Asn
 65 70 75 80
 Gly Arg Lys Ala Cys Leu Asn Pro Ala Ser Pro Ile Val Lys Lys Ile
 85 90 95
 Ile Glu Lys Met Leu Asn Ser Asp Lys Ser Asn
 100 105

<210> 58
 <211> 1560
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (102)...(398)

<400> 58
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 Met Thr Ser Lys Leu

60
 116

gcc gtg gct ctc ttg gca gcc ttc ctg att tct gca gct ctg tgt gaa 164
 Ala Val Ala Leu Leu Ala Ala Phe Leu Ile Ser Ala Ala Leu Cys Glu
 10 15 20
 ggt gca gtt ttg sca agg agt gct aaa gaa ctt aga tgt cag tgc ata 212
 Gly Ala Val Leu Pro Arg Ser Ala Lys Glu Leu Arg Cys Gln Cys Ile
 25 30 35
 aag aca tac tcc aaa cct ttc cac ccc aaa ttt atc aaa gaa ctg aga 260
 Lys Thr Tyr Ser Lys Pro Phe His Pro Lys Phe Ile Lys Glu Leu Arg
 40 45 50
 gtg att gag agt gga cca cac tgc gcc aac aca gaa att att gta aag 308
 Val Ile Glu Ser Gly Pro His Cys Ala Asn Thr Glu Ile Ile Val Lys
 55 60 65
 ctt tct gat gga aga gag ctc tgt ctg gac ccc aag gaa aac tgg gtg 356
 Leu Ser Asp Gly Arg Glu Leu Cys Leu Asp Pro Lys Glu Asn Trp Val
 70 75 80 85
 cag agg gtt gtg gag aag ttt ttg aag agg gct gag aat tca 398
 Gln Arg Val Val Glu Lys Phe Leu Lys Arg Ala Glu Asn Ser
 90 95
 taaaaaaatt cattctctgt ggtatccaag aatcagtgaa gatgcagtg aaacttcaag 458
 caaatctact tcaacacttc atgtattgtg tgggtctgtt gtagggttgc cagatgcaat 518
 acaagattcc tgggttaaatt tgaatttcag taaacaatga atagtttttc attgtaccat 578
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 aaataaatttt taaatataag gatttttccta gatattgcac gggagaatat acaaatagca 698
 aaattggggcc aaggggccaag agaatatccg aactttaatt tcaggaattg aatggggttg 758
 ctagaatgtg atattttgaag catcacataa aaatgatggg acaataaatt ttgccataaa 818
 gtcaaattta gctggaaatc ctggattttt ttctgtttaa tctggcaacc ctagtctgct 878
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 aaaaagtatt agccaccatc ttacctcaca gtgatgttgt gaggacatgt ggaagcactt 998
 taagtttttt catcataaca taaattattt tcaagtgtaa cttattaacc tatttattat 1058
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 cattgattga atagttataa agatgttata gtaaatattt tttatttttag atattaaatg 1178
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 cccagttaaa ttttcatttc agatatacaa caaataattt tttagtataa gtacattatt 1298
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 agccaaaact ccacagtcaa tattagtaat ttcttgctgg ttgaaacttg tttattatgt 1478
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 ttttaacttt aaaaaaaacc gg 1560

<210> 59

<211> 15

<212> PRT

<213> Homo sapiens

<400> 59

Asn Leu Gln Val Phe Ala Ile Gly Pro Gln Cys Ser Lys Val Glu
1 5 10 15

<210> 60
<211> 14
<212> PRT
<213> Homo sapiens

<400> 60

Val Asp Tyr Tyr Glu Thr Ser Ser Leu Cys Ser Gln Pro Ala
1 5 10

<210> 61
<211> 15
<212> PRT
<213> Homo sapiens

<400> 61

Val Asp Tyr Tyr Glu Thr Ser Ser Leu Cys Ser Gln Pro Ala Val
1 5 10 15

<210> 62
<211> 15
<212> PRT
<213> Homo sapiens

<400> 62

Glu Ser Tyr Arg Arg Ile Thr Asn Ile Gln Cys Pro Lys Glu Ala
1 5 10 15

<210> 63
<211> 15
<212> PRT
<213> Homo sapiens

<400> 63

Glu Ser Tyr Arg Arg Thr Thr Ser Ser His Cys Pro Arg Glu Ala
1 5 10 15

<210> 64
<211> 15
<212> PRT
<213> Homo sapiens

<400> 64

Lys Ser Tyr Val Ile Thr Thr Ser Arg Cys Pro Gln Lys Ala Val
1 5 10 15

<210> 65
<211> 12
<212> PRT
<213> Homo sapiens

<400> 65
Glu Ile Cys Ala Asp Pro Lys Glu Lys Trp Val Gln
1 5 10

<210> 66
<211> 12
<212> PRT
<213> Homo sapiens

<400> 66
Glu Ile Cys Ala Asp Pro Thr Gln Lys Trp Val Gln
1 5 10

<210> 67
<211> 12
<212> PRT
<213> Homo sapiens

<400> 67
Glu Ile Cys Ala Asp Pro Lys Glu Arg Trp Val Arg
1 5 10

<210> 68
<211> 16
<212> PRT
<213> Homo sapiens

<400> 68
Met Ile Cys Ala Asp Pro Lys Xaa Ala Ala Xaa Ala Ala Trp Val Gln
1 5 10 15

<210> 69
<211> 15
<212> PRT
<213> Homo sapiens

<400> 69
Ser Val Asn Val Lys Ser Pro Gly Pro His Cys Ala Gln Thr Glu
1 5 10 15

<210> 70
<211> 15
<212> PRT
<213> Homo sapiens

<400> 70
Ser Val Lys Val Lys Ser Pro Gly Pro His Cys Ala Gln Thr Glu
1 5 10 15

<210> 71
<211> 15
<212> PRT
<213> Homo sapiens

<400> 71
 Ser Val Asn Val Arg Ser Pro Gly Pro His Cys Ala Gln Thr Glu
 1 5 10 15

<210> 72
 <211> 12
 <212> PRT
 <213> Homo sapiens

<400> 72
 Lys Ala Cys Leu Asn Pro Ala Ser Pro Ile Val Lys
 1 5 10

<210> 73
 <211> 12
 <212> PRT
 <213> Homo sapiens

<400> 73
 Lys Ala Cys Leu Asn Pro Ala Ser Pro Met Val Lys
 1 5 10

<210> 74
 <211> 12
 <212> PRT
 <213> Homo sapiens

<400> 74
 Lys Ala Cys Leu Asn Pro Ala Ser Pro Met Val Gln
 1 5 10

<210> 75
 <211> 12
 <212> PRT
 <213> Homo sapiens

<400> 75
 Lys Ser Tyr Lys Ile Ile Thr Ser Ser Lys Cys Pro
 1 5 10

<210> 76
 <211> 661
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (32)...(331)

<400> 76
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 Met Lys Val Ser Ala Ala Leu

52

1

5

ctg tgc ctg ctg ctc ata gca gcc acc ttc att ccc caa ggg ctc gct 100
 Leu Cys Leu Leu Leu Ile Ala Ala Thr Phe Ile Pro Gln Gly Leu Ala
 10 15 20

cag cca gat gca atc aat gcc cca gtc acc tgc tgc tat aac ttc acc 148
 Gln Pro Asp Ala Ile Asn Ala Pro Val Thr Cys Cys Tyr Asn Phe Thr
 25 30 35

aat agg aag atc tca gtg cag agg ctc gcg agc tat aga aga atc acc 196
 Asn Arg Lys Ile Ser Val Gln Arg Leu Ala Ser Tyr Arg Arg Ile Thr
 40 45 50 55

agc agc aag tgt ccc aaa gaa gct gtg atc ttc aag acc att gtg gcc 244
 Ser Ser Lys Cys Pro Lys Glu Ala Val Ile Phe Lys Thr Ile Val Ala
 60 65 70

aag gag atc tgt gct gac ccc aag cag aag tgg gtt cag gat tcc atg 292
 Lys Glu Ile Cys Ala Asp Pro Lys Gln Lys Trp Val Gln Asp Ser Met
 75 80 85

gac cac ctg gac aag caa acc caa act cgg aag act tga acactcactc 341
 Asp His Leu Asp Lys Gln Thr Gln Thr Pro Lys Thr *
 90 95

cacaacccaa gaatctgcag ctaacttatt ttcccctagc tttccccaga catcctgttt 401
 tattttatta taatgaattt tgtttgttga tgtgaaacat tatgccttaa gtaatgttaa 461
 ttcttattta agttattgat gttttaagtt tatctttcat ggtactagt ttttttagat 521
 acagagactt ggggaaattg cttttcctct tgaaccacag ttctaccctt gggatgtttt 581
 gaggggtctt gcaagaatca tttttttaac attccaatgc atttaataca aagaattgct 641
 aaaatattat tgtggaaatg 661

<210> 77

<211> 1847

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (80)...(346)

<400> 77

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 ccgccccgcc gccgcgcc atg aac gcc aag gtc gtg gtc gtg ctg gtc ctc 112
 Met Asn Ala Lys Val Val Val Val Leu Val Leu
 1 5 10

gtg ctg acc gcg ctc tgc ctc agc gac ggg aag ccc gtc agc ctg agc 160
 Val Leu Thr Ala Leu Cys Leu Ser Asp Gly Lys Pro Val Ser Leu Ser
 15 20 25

tac aga tgc cca tgc cga ttc ttc gaa agc cat gtt gcc aga gcc aac 208

Tyr	Arg	Cys	Pro	Cys	Arg	Phe	Phe	Glu	Ser	His	Val	Ala	Arg	Ala	Asn	
		30					35					40				
gtc	aag	cat	ctc	aaa	att	ctc	aac	act	cca	aac	tgt	gcc	ctt	cag	att	256
Val	Lys	His	Leu	Lys	Ile	Leu	Asn	Thr	Pro	Asn	Cys	Ala	Leu	Gln	Ile	
	45					50					55					
gta	gcc	cgg	ctg	aag	aac	aac	aac	aga	caa	gtg	tgc	att	gac	ccg	aag	304
Val	Ala	Arg	Leu	Lys	Asn	Asn	Asn	Arg	Gln	Val	Cys	Ile	Asp	Pro	Lys	
	60				65				70						75	
cta	aag	tgg	att	cag	gag	tac	ctg	gag	aaa	gct	tta	aac	aag			346
Leu	Lys	Trp	Ile	Gln	Glu	Tyr	Leu	Glu	Lys	Ala	Leu	Asn	Lys			
			80					85								
taagcacaac	agccaaaaaag	gactttccgc	tagaccact	cgaggaaaac	taaaaccttg											406
tgagagatga	aagggcaaag	acgtggggga	gggggcctta	accatgagga	ccaggtgtgt											466
gtgtggggtg	ggcacattga	tctgggatcg	ggcctgaggt	ttgcagcatt	tagaccctgc											526
atztatagca	tacggtatga	tattgcagct	tatatccatc	catgccctgt	acctgtgcac											586
gttggaactt	ttattactgg	ggtttttcta	agaaagaaat	tgtattatca	acagcatttt											646
caagcagtta	gttccttcat	gatcatcaca	atcatcatca	ttctcattct	cattttttta											706
atcaacgagt	acttcaagat	ctgaatttgg	cttggttggg	gcattctctc	tgtctccctg											766
gggagtctgg	gcacagtcag	gtgggtggctt	aacagggagc	tggaaaaagt	gtcctttctt											826
cagacactga	ggctcccgcg	gcagcgcccc	tccaagagg	aaggcctctg	tggcactcag											886
ataccgactg	gggctggggc	gccgccactg	ccttcacctc	ctctttcaaa	cctcagtgat											946
tggctctgtg	ggctccatgt	agaagccact	attactggga	ctgtctcaga	gacccctctc											1006
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tttggcctcc	tccagaatgg	agctggccct	ctcctgggga	tgtgtaatgg	tccccctgct											1246
tacccgcaaa	agacaagtct	ttacagaatc	aaatgcaatt	ttaaatctga	gagctcgctt											1306
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tttccatgca	tagatgcgat	ccacagaagg	tcttggttgt	atgtgttaact	ttttgcaagg											1546
cattttttta	tatatatttt	tgtgcacatt	tttttttacg	attctttaga	aaacaaatgt											1606
atttcaaaat	atatttatag	tcgaacaagt	catatatatg	aatgagagcc	atatgaatgt											1666
cagtagttta	tacttctcta	ttatctcaaa	ctactggcaa	tttgtaaaga	aatatatatg											1726
atatataaat	gtgattgcag	cttttcaatg	ttagccacag	tgtatttttt	cacttgact											1786
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a																1847

<210> 78
 <211> 1160
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (27) ... (299)

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Met Lys Val Ser Ala Ala Arg Leu Ala
1 5

gtc atc ctc att gct act gcc ctc tgc gct cct gca tct gcc tcc cca 101
Val Ile Leu Ile Ala Thr Ala Leu Cys Ala Pro Ala Ser Ala Ser Pro
10 15 20 25

tat tcc tcg gac acc aca ccc tgc tgc ttt gcc tac att gcc cgc cca 149
Tyr Ser Ser Asp Thr Thr Pro Cys Cys Phe Ala Tyr Ile Ala Arg Pro
30 35 40

ctg ccc cgt gcc cac atc aag gag tat ttc tac acc agt ggc aag tgc 197
Leu Pro Arg Ala His Ile Lys Glu Tyr Phe Tyr Thr Ser Gly Lys Cys
45 50 55

tcc aac cca gca gtc gtc ttt gtc acc cga aag aac cgc caa gtg tgt 245
Ser Asn Pro Ala Val Val Phe Val Thr Arg Lys Asn Arg Gln Val Cys
60 65 70

gcc aac cca gag aag aaa tgg gtt cgg gag tac atc aac tct ttg gag 293
Ala Asn Pro Glu Lys Lys Trp Val Arg Glu Tyr Ile Asn Ser Leu Glu
75 80 85

atg agc taggatggag agtccttgaa cctgaactta cacaaatttg cctgtttctg 349
Met Ser
90

cttgctcttg tcttagcttg ggaggcttcc cctcactatc ctaccccacc cgctccttga 409
agggcccaga ttctgaccac gacgagcagc agttacaaaa accttcccca ggctggacgt 469
ggtggctcag ccttgtaatc ccagcacttt gggaggccaa ggtgggtgga tcacttgagg 529
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ctctggcttt gccttggtt tgcaagggtc ctgtgacaag gaaggaagtc agcatgcctc 1069
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ggagcttact ggcaaacatg aaaaatcggg g 1160

<210> 79
<211> 696
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (109)...(384)

<400> 79
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tgagttctgc agcctcacct ctgagaaaac ctcttttcca ccaatacc atg aag ctc	117
Met Lys Leu	
1	
tgc gtg act gtc ctg tct ctc ctc atg cta gta gct gcc ttc tgc tct	165
Cys Val Thr Val Leu Ser Leu Leu Met Leu Val Ala Ala Phe Cys Ser	
5 10 15	
cca gcg ctc tca gca cca atg ggc tca gac cct ccc acc gcc tgc tgc	213
Pro Ala Leu Ser Ala Pro Met Gly Ser Asp Pro Pro Thr Ala Cys Cys	
20 25 30 35	
ttt tct tac acc gcg agg aag ctt cct cgc aac ttt gtg gta gat tac	261
Phe Ser Tyr Thr Ala Arg Lys Leu Pro Arg Asn Phe Val Val Asp Tyr	
40 45 50	
tat gag acc agc agc ctc tgc tcc cag cca gct gtg gta ttc caa acc	309
Tyr Glu Thr Ser Ser Leu Cys Ser Gln Pro Ala Val Val Phe Gln Thr	
55 60 65	
aaa aga agc aag caa gtc tgt gct gat ccc agt gaa tcc tgg gtc cag	357
Lys Arg Ser Lys Gln Val Cys Ala Asp Pro Ser Glu Ser Trp Val Gln	
70 75 80	
gag tac gtg tat gac ctg gaa ctg aac tgagctgtc agagacagga	404
Glu Tyr Val Tyr Asp Leu Glu Leu Asn	
85 90	
agtcttcagg gaaggtcacc tgagcccgga tgctttctcca tgagacacat ctctccata	464
ctcaggactc ctctccgcag ttctgtccc ttctcttaat ttaattcttt ttatgtgccg	524
tggtattgta ttaggtgtca ttccattat ttatattagt ttagcctaaag gataagtgc	584
ctatggggat ggtccactgt cactgtttct ctgctgttgc aaataatgg ataacacatt	644
tgattctgtg tgttttccat aataaaactt taaaataaaa tgcagacagt ta	696
<210> 80	
<211> 2738	
<212> DNA	
<213> Homo sapiens	
<220>	
<221> CDS	
<222> (123)...(353)	
<400> 80	
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aggtttctgc agcgttctg tgctgtctgc tcatggcagc cactttcagc cctcagggac	120
tt gct cag cca gat tca gtt tcc att cca atc acc tgc tgc ttt aac	167
Ala Gln Pro Asp Ser Val Ser Ile Pro Ile Thr Cys Cys Phe Asn	
1 5 10 15	
gtg atc aat agg aaa att cct atc cag agg ctg gag agc tac aca aga	215
Val Ile Asn Arg Lys Ile Pro Ile Gln Arg Leu Glu Ser Tyr Thr Arg	
20 25 30	

atc acc aac atc caa tgt ccc aag gaa gct gtg atc ttc aag acc caa	263
Ile Thr Asn Ile Gln Cys Pro Lys Glu Ala Val Ile Phe Lys Thr Gln	
35 40 45	
cgg ggc aag gag gtc tgt gct gac ccc aag gag aga tgg gtc agg gat	311
Arg Gly Lys Glu Val Cys Ala Asp Pro Lys Glu Arg Trp Val Arg Asp	
50 55 60	
tcc atg aag cat ctg gac caa ata ttt caa aat ctg aag cca	353
Ser Met Lys His Leu Asp Gln Ile Phe Gln Asn Leu Lys Pro	
65 70 75	
tgagccttca tacatggact gagagtcaga gcttgaagaa aagcttatttt attttcccca	413
acctccccc ggtgcagtgt gacattatttt tattataaca tccacaaaga gattattttt	473
aaataattta aagcataata tttcttaaaa agtattttaat tatattttaag ttgttgatgt	533
tttaactcta tctgtcatat atcctagtga atgtaaaatg caaaatcctg gtgatgtgtt	593
ttttgttttt gttttcctgt gagctcaact aagttcacgg caaaatgtca ttgttctccc	653
tcctacctgt ctgtagtgtt gtggggctct cccatggatc atcaagggtga aacactttgg	713
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<220>
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<400> 81

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gtcccttttg	atcgtgggtga	tttagagggt	gaactcactg	gaatggggat	gcttgcattg	240
gtaatcttac	taagagctaa	tagaaaggct	aggaccaaac	cagaaacctc	caattctcat	300
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		Met Lys Ala Ser Ala Ala Leu Leu				
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tgt ctg ctg ctc aca gca gct gct ttc agc ccc cag ggg ctt gct cag						400
Cys Leu Leu Leu Thr Ala Ala Ala Phe Ser Pro Gln Gly Leu Ala Gln						
10	15	20				
cca gtt ggg att aat act tca act acc tgc tgc tac aga ttt atc aat						448
Pro Val Gly Ile Asn Thr Ser Thr Thr Cys Cys Tyr Arg Phe Ile Asn						
25	30	35	40			
aag aaa atc cct aag cag agg ctg gag agc tac aga agg acc acc agt						496
Lys Lys Ile Pro Lys Gln Arg Leu Glu Ser Tyr Arg Arg Thr Thr Ser						
45	50	55				
agc cac tgt ccc cgg gaa gct gta atc ttc aag acc aaa ctg gac aag						544
Ser His Cys Pro Arg Glu Ala Val Ile Phe Lys Thr Lys Leu Asp Lys						
60	65	70				
gag atc tgt gct gac ccc aca cag aag tgg gtc cag gac ttt atg aag						592
Glu Ile Cys Ala Asp Pro Thr Gln Lys Trp Val Gln Asp Phe Met Lys						
75	80	85				
cac ctg gac aag aaa acc caa act cca aag ctt tgaacattca tgactgaact						645
His Leu Asp Lys Lys Thr Gln Thr Pro Lys Leu						
90	95					
gaaaacaagc	catgacttga	gaaacaaata	atattgtatac	cctgtccttt	ctcagagtgg	705
ttctgagatt	attttaatct	aattctaagg	aatatgagct	ttatgtaata	atgtgaatca	765
tggtttttct	tagtagattt	taaaagttat	taatatttta	attttaatctt	ccatggattt	825
tgggtgggttt	tgaacataaa	gccttggatg	tatatgtcat	ctcagtgtctg	taaaaactgt	885
gggatgctcc	tcccttctct	acctcatggg	ggtattgtat	aagtccttgc	aagaatcagt	945
gcaaagattt	gctttaattg	ttaagatatg	atgtccctat	ggaagcatat	tgattattata	1005
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acaaaaaaaa	aaaaaaaaaa					1085

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 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (84) ... (359)

<400> 82

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 Met Gln Val Ser Thr Ala Ala Leu Ala Val
 1 5 10

ctc ctc tgc acc atg gct ctc tgc aac cag ttc tct gca tca ctt gct 161
 Leu Leu Cys Thr Met Ala Leu Cys Asn Gln Phe Ser Ala Ser Leu Ala
 15 20 25

gct gac acg ccg acc gcc tgc tgc ttc agc tac acc tcc cgg cag att 209
 Ala Asp Thr Pro Thr Ala Cys Cys Phe Ser Tyr Thr Ser Arg Gln Ile
 30 35 40

cca cag aat ttc ata gct gac tac ttt gag acg agc agc cag tgc tcc 257
 Pro Gln Asn Phe Ile Ala Asp Tyr Phe Glu Thr Ser Ser Gln Cys Ser
 45 50 55

aag ccc ggt gtc atc ttc cta acc aag cga agc cgg cag gtc tgt gct 305
 Lys Pro Gly Val Ile Phe Leu Thr Lys Arg Ser Arg Gln Val Cys Ala
 60 65 70

gac ccc agt gag gag tgg gtc cag aaa tat gtc agc gac ctg gag ctg 353
 Asp Pro Ser Glu Glu Trp Val Gln Lys Tyr Val Ser Asp Leu Glu Leu
 75 80 85 90

agt gcc tgaggggtcc agaagcttcg aggcccagcg acctcggtgg gccagtgagg 409
 Ser Ala

gaggagcagg agcctgagcc ttgggaacat gcgtgtgacc tccacagcta cctcttctat 469
 ggactgggtg ttgccaaaca gccacactgt gggactcttc ttaacttaaa ttttaattta 529
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<210> 83
 <211> 98
 <212> PRT
 <213> Homo sapiens

<400> 83

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		20						25					30		
Thr	Cys	Cys	Phe	Thr	Phe	Ser	Ser	Lys	Lys	Ile	Ser	Leu	Gln	Arg	Leu
		35					40					45			
Lys	Ser	Tyr	Val	Ile	Thr	Thr	Ser	Arg	Cys	Pro	Gln	Lys	Ala	Val	Ile
	50					55					60				
Phe	Arg	Thr	Lys	Leu	Gly	Lys	Glu	Ile	Cys	Ala	Asp	Pro	Lys	Glu	Lys
65					70					75					80
Trp	Val	Gln	Asn	Tyr	Met	Lys	His	Leu	Gly	Arg	Lys	Ala	His	Thr	Leu
				85					90					95	
Lys	Thr														



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